

Date: Thursday 2/8/2007 12:07:21 PM  
User: Kim Johnston

## Process Sheet

|                       |   |                  |                     |
|-----------------------|---|------------------|---------------------|
| Customer              | : CU-DAR001 Dart Helicopters Services   | Drawing Name     | : AFT TUBE ASSEMBLY |
| Job Number            | : 30696   |                  |                     |
| Estimate Number       | : 10699   |                  |                     |
| P.O. Number           | : <i>N/A</i>  | Part Number      | : D3391025          |
| This Issue            | : 2/8/2007  | Drawing Number   | : D3391 REV E       |
| Prsht Rev.            | : NC  | Project Number   | : N/A               |
| First Issue           | : <i>N/A</i>  | Drawing Revision | : E                 |
| Previous Run          | : 30695   | Material         | : <i>N/A</i>        |
| Written By            | : <i>[Signature]</i>  | Due Date         | : 3/2/2007          |
| Checked & Approved By | : <i>[Signature]</i> 07.02.08   | Qty:             | 1 Um: Each          |
| Comment               | Est Rev B 06-02-07 ECN773 dwg rev. D EC<br>Est Rev: C 06-03-28 Update Manufacturing Instructions<br>JLM |                  |                     |

## Additional Product

Job Number:



|         |                       |               |
|---------|-----------------------|---------------|
| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|

|     |          |                    |
|-----|----------|--------------------|
| 1.0 | D6014090 | ALUMINUM EXTRUSION |
|-----|----------|--------------------|



Comment: Qty.: 1.0000 f(s)/Unit Total : 1.0000 f(s)

ALUMINUM EXTRUSION

Pick:

|     |             |             |                |
|-----|-------------|-------------|----------------|
| Qty | Part Number | Description | Batch          |
| 1   | D6014-090   | Extrusion   | <i>B 26564</i> |

Identify as D3391-3

*JP 07/02/03*

|     |            |                            |
|-----|------------|----------------------------|
| 2.0 | MORI SEIKI | MORI SEIKI CNC LATHE LARGE |
|-----|------------|----------------------------|



Comment: MORI SEIKI CNC LATHE LARGE

Turn as per Folio FA599

Rev: *AA* & Dwg D3391 Rev: *E**JP 07/02/03*

|     |     |  |
|-----|-----|--|
| 3.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE |
|-----|-----|--|



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

*JP 07/02/14*

|     |       |                                |
|-----|-------|--------------------------------|
| 4.0 | HAAS1 | HAAS CNC VERTICAL MACHINING #1 |
|-----|-------|--------------------------------|



Comment: HAAS

1-Machine as per Folio FA 599 Rev: *AA* & Dwg D3391 Rev: *E*

2-Drill ( PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

3-Deburr

*JP 07/02/15*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 30696

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

En 07/02/15 x1

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 07.02.21

7.0

BENDING

BENDING MACHINE



Comment: NC Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP 7-2-21

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 07-02-21

9.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill Tube as per D3391 using DT8809 (HOLES MARKED "A" ONLY)

3-Drill and c' sink wearshoe holes as per Dwg D3391 Using DT8878(Mid Tube) &amp; DT8217 Wearplate Jig

4-C'sink holes for float bag (4 holes per side) as per Dwg D3391

5-Deburr

BE/JO  
07-02-22

Tools: rill

10.0

QC5

INSPECT WORK TO CURRENT STEP



PA 07.02.23



Comment: INSPECT WORK TO CURRENT STEP

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

JD 7-3-13

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |  |                                 |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|--|---------------------------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |  |                                 | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        |  | Action Description<br>Chief Eng |                           |                       |                          |
|      |      |                                  |                             |  |                                 |                           |                       |                          |
|      |      |                                  |                             |  |                                 |                           |                       |                          |
|      |      |                                  |                             |  |                                 |                           |                       |                          |

NOTE: Date & initial all entries

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 30696

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

POWDER COATING

POWDER COATING



m/03706



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

FL/MR

07/03/14

①

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FL 7/3/15(2)

14.0

NAS1330C3KB166

INSERT



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

INSERT

Pick:

Qty

Part Number

Description

Batch

8

NAS1330C3KB166

Insert

m/00732

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per dwg

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

MR 07/03/15

17.0

AESS10KB366

INSERT



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Insert

Pick:

Qty

Part Number

Description

Batch

14

AESS10KB366

Insert

m/02642

18.0

AESS10KB266

INSERT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

INSERT

Pick:

Qty

Part Number

Description

Batch

2

AESS10KB266

Insert

or NAS1330C3KB266

m/17905

FL

07/03/15①

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 30696

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

AESS10KB316

INSERT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

INSERT

Pick:

| Qty | Part Number       | Description | Batch  |
|-----|-------------------|-------------|--------|
| 2   | AESS10KB316       | Insert      | m17905 |
|     | or NAS1330C3KB316 |             |        |

20.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Aft Cap

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|-------|
| 1   | D2646       | Aft Cap     | B3049 |

21.0

AN3C4A

BOLT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Pick:

| Qty | Part Number | Description | Batch   |
|-----|-------------|-------------|---------|
| 2   | AN3C4A      | Bolt        | m101390 |

22.0

AN960C10L

washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Inventory

Pick:

| Qty | Part Number | Description | Batch   |
|-----|-------------|-------------|---------|
| 2   | AN960C10L   | Washer      | m103344 |

23.0

NAS1515H3L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Pick:

| Qty | Part Number | Description | Batch   |
|-----|-------------|-------------|---------|
| 2   | NAS1515H3L  | Washer      | m103641 |

FL/

02/03/15

①

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries



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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 30696

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291

Sikaflex expiry date:

02/03/97  
02/10

FR/

07/03/15 (1)

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

**POSITIVE RECALL**

EFFECTIVE 07.02.23 AUTH P/L

RELEASED 07.02.23 DATE P/L

PPA B30517 07/3/20

27.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

(1)  
07/03/20

Job Completion



U 07.03.20

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

|  |  |                             |
|--|--|-----------------------------|
| <b>DART AEROSPACE LTD</b>                  |  | <b>Work Order:</b> 30696    |
| <b>Description:</b> Float Skidtube (412)   |  | <b>Part Number:</b> D3391-3 |
| <b>Inspection Dwg:</b> D3391 <b>Rev:</b> E |  | Page 1 of 1                 |

### FIRST ARTICLE INSPECTION CHECKLIST

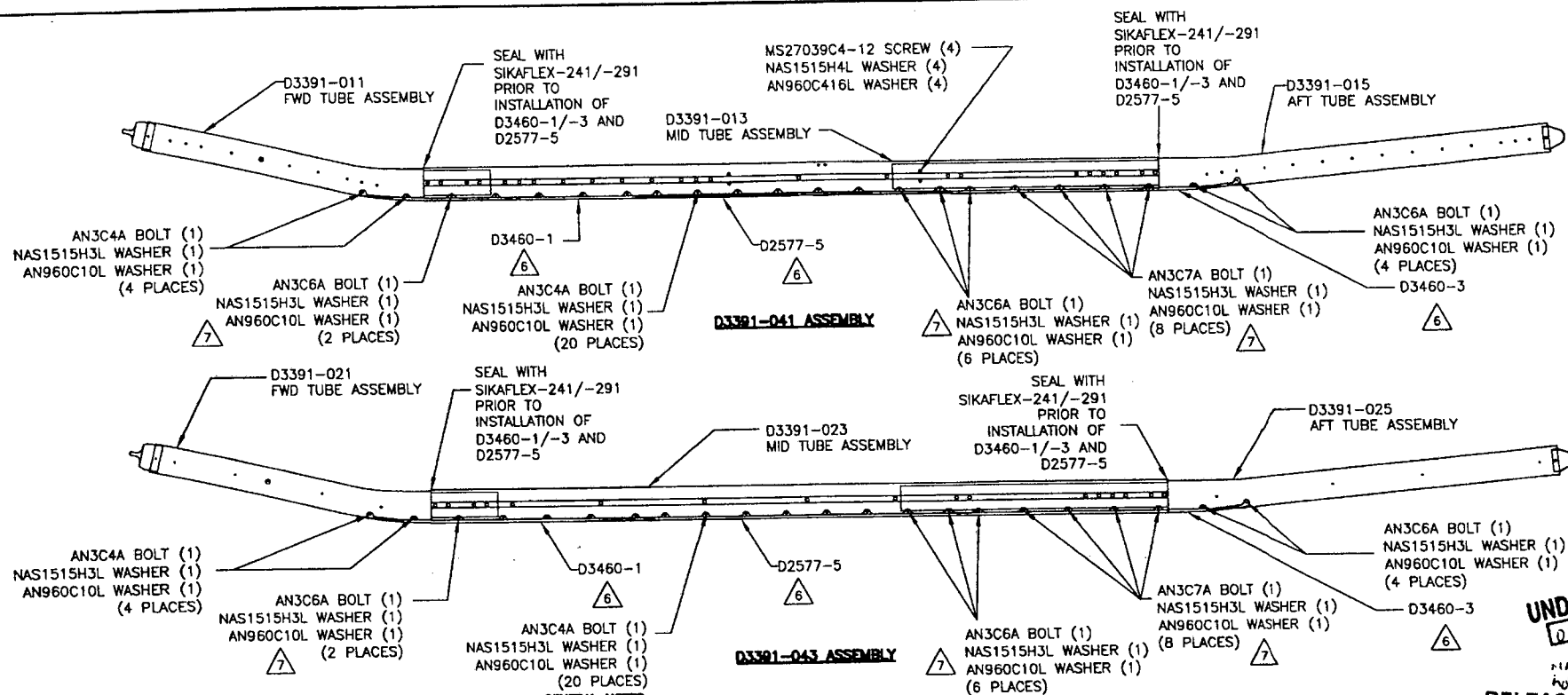
☒ First Article ☐ Prototype

| Drawing Dimension | Tolerance                | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|--------------------------|------------------|--------|--------|----------------------|----------|
| 14.000            | +/-0.010                 | 14.000           | ✓      |        |                      |          |
| 3.500             | +/-0.010                 | 3.500            | ✓      |        |                      |          |
| 88.93             | +/-0.030                 | 88.93            | ✓      |        |                      |          |
| 44.995            | +/-0.030                 | 45.00            | ✓      |        | Impe                 |          |
| 3.200             | +/-0.010                 | 3.195            | ✓      |        |                      |          |
| 1.526             | +0.000/-0.030            | 1.526            | ✓      |        |                      |          |
| 0.200             | +/-0.010                 | 0.201            | ✓      |        |                      |          |
| 7.500             | +/-0.010                 | 7.500            | ✓      |        |                      |          |
| 27.750            | +/-0.010                 | 27.750           | ✓      |        | Tap                  |          |
| 31.750            | +/-0.010                 | 31.750           | ✓      |        | Tap                  |          |
| 35.250            | +/-0.010                 | 35.250           | ✓      |        | Tap                  |          |
| 0.400             | +/-0.010                 | 0.395            | ✓      |        |                      |          |
| <del>Ø0.208</del> | <del>+0.005/-0.001</del> |                  |        |        |                      |          |
| 3.300             | +/-0.010                 | 3.310 / 3.295    | ✓      |        |                      |          |
| 0.200             | +/-0.010                 | 0.201            | ✓      |        |                      |          |
| 3.520             | +/-0.010                 | 3.529            | ✓      |        |                      |          |
| 0.687             | +0.010/-0.000            | 0.687            | ✓      |        |                      |          |
| R0.062            | +/-0.010                 | 0.062            | ✓      |        |                      |          |
| Ø0.484            | +0.005/-0.001            | 0.485            | ✓      |        |                      |          |
|                   |                          |                  |        |        |                      |          |
|                   |                          |                  |        |        |                      |          |
|                   |                          |                  |        |        |                      |          |
|                   |                          |                  |        |        |                      |          |
|                   |                          |                  |        |        |                      |          |

PH  
07.02.21

|                          |                       |                                |
|--------------------------|-----------------------|--------------------------------|
| <b>Measured by:</b> SP/S | <b>Audited by:</b> SD | <b>Prototype Approval:</b> N/A |
| <b>Date:</b> 07/02/21    | <b>Date:</b> 07.02.21 | <b>Date:</b> N/A               |

| Rev | Date     | Change                  | Revised by | Approved |
|-----|----------|-------------------------|------------|----------|
| A   | 06.04.24 | New Issue P/O D3391-025 | KJ/JLM     |          |
| B   | 06.06.19 | Dwg revision update     | KJ/JLM     |          |



#### GENERAL NOTES

- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL "E" SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS. C/SINK #0.391/#0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) APPLY A LAYER OF SIKAFLEX-241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- 7) DO NOT TORQUE, HAND TIGHTEN ONLY

#### D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

| QTY - 041 | QTY - 043 | PART NUMBER  | DESCRIPTION             |
|-----------|-----------|--------------|-------------------------|
| X         | X         | D3391-041    | FLOAT SKIDTUBE ASSEMBLY |
|           |           | D3391-043    | FLOAT SKIDTUBE ASSEMBLY |
| 1         |           | D3391-011    | FWD TUBE ASSEMBLY       |
| 1         |           | D3391-013    | MID TUBE ASSEMBLY       |
| 1         |           | D3391-015    | AFT TUBE ASSEMBLY       |
|           | 1         | D3391-021    | FWD TUBE ASSEMBLY       |
|           | 1         | D3391-023    | MID TUBE ASSEMBLY       |
|           | 1         | D3391-025    | AFT TUBE ASSEMBLY       |
| 24        | 24        | AN3C4A       | BOLT                    |
| 12        | 12        | AN3C6A       | BOLT                    |
| 8         | 8         | AN3C7A       | BOLT                    |
| 44        | 44        | NAS1515H3L   | WASHER                  |
| 44        | 44        | AN960C10L    | WASHER                  |
| 4         |           | MS27039C4-12 | SCREW                   |
| 4         |           | NAS1515H4L   | WASHER                  |
| 4         |           | AN960C416L   | WASHER                  |
| 1         | 1         | D2577-5      | WEARSHOE                |
| 1         | 1         | D3460-1      | WEARSHOE                |
| 1         | 1         | D3460-3      | WEARSHOE                |

UNCONTROLLED COPY  
ENGINEERING  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 30656  
SHOP COPY  
RETURN TO

UNDER REVIEW  
07.02.03  
06.05.03

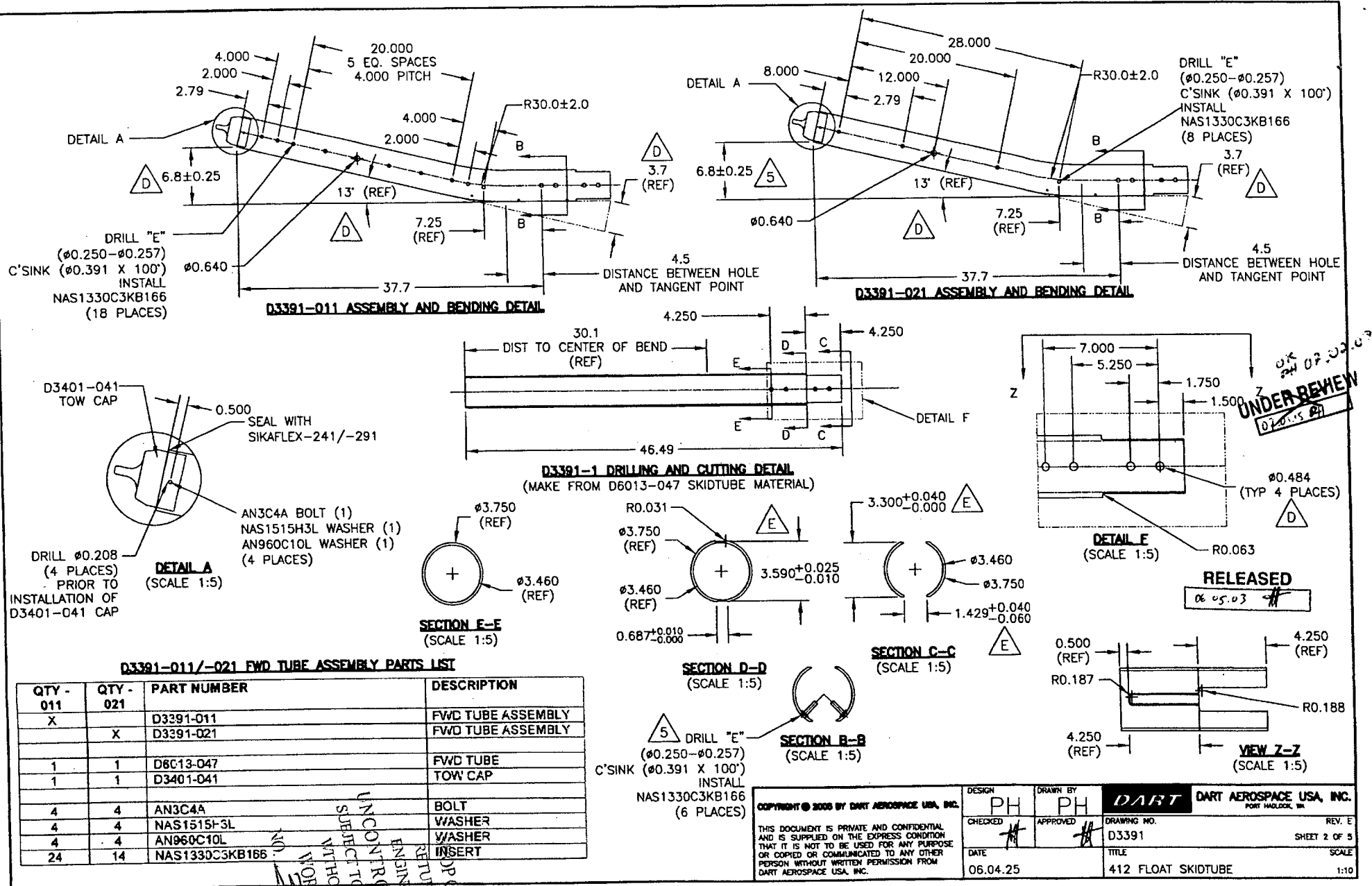
RELEASED

06.05.03

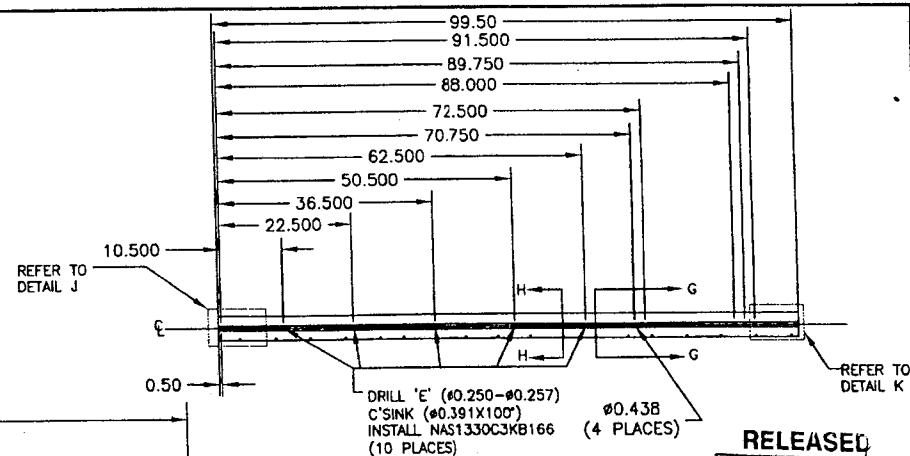
|         |          |                                    |
|---------|----------|------------------------------------|
| E       | 06.04.25 | CHANGE TOLERANCE, EASE MANUFACTURE |
| D       | 06.01.23 | UPDATE TOLERANCE, CHANGE HOLE SIZE |
| C       | 05.09.27 | LENGTHEN AFT EXTENSION             |
| B       | 05.06.10 | DRAWING UPDATES                    |
| A       | 05.02.07 | NEW ISSUE                          |
| DESIGN  | PH       | DRAWN BY PH                        |
| CHECKED | *        | APPROVED *                         |
| DATE    | 06.04.25 | DRAWING NO. D3391                  |
|         |          | TITLE 412 FLOAT SKIDTUBE           |
|         |          | REV. E SHEET 1 OF 5                |
|         |          | SCALE NTS                          |

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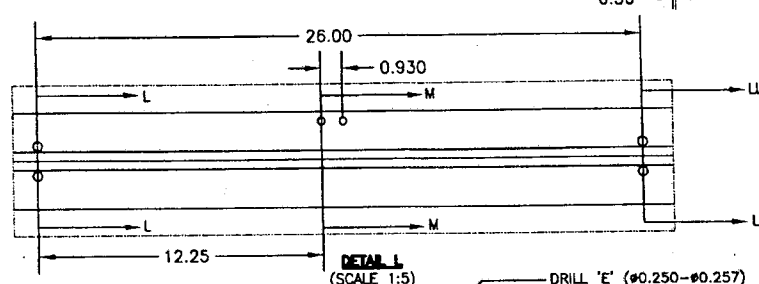


UNCONTROLLED COPY  
ENGINEERING  
RETURN TO  
WAS  
WAS  
BOL  
NO. 30696  
WITHOUT NOTICE  
WORK ORDER

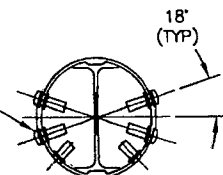


RELEASED

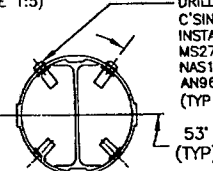
06.25.01



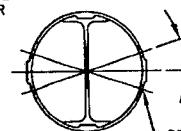
**DETAIL 1**  
(SCALE 1:5)



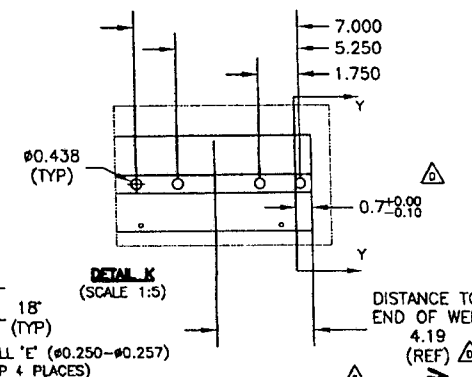
18'  
(TYP)



**SECTION M-M**  
(SCALE 1:4)



**SECTION 11-11**  
(SCALE 1:4)

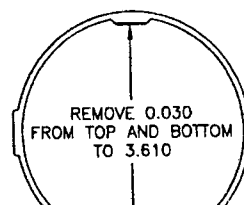


**DETAIL K**  
(SCALE 1:5)

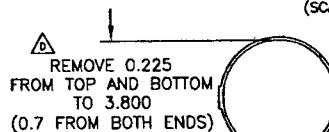


**SECTION H-H**  
(SCALE 1:4)

**SECTION 1-1**  
(SCALE 1:4)



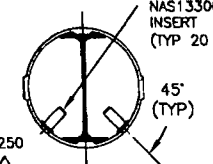
**SECTION X-X**  
(SCALE 1:2)



**SECTION Y-Y**  
(SCALE 1:4)



**SECTION C-C**  
(SCALE 1:4)



**SECTION H-H**  
(SCALE 1:4)

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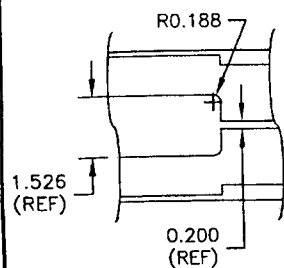
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| CHECKED  | APPROVED |
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| 06.04.25 |          |

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| DRAWING NO.<br><b>D3391</b>   | REV. E<br>SHEET 3 OF 5 |
| TITLE<br><b>412 FLOAT SKIDTUBE</b>  | SCALE<br>1:20          |

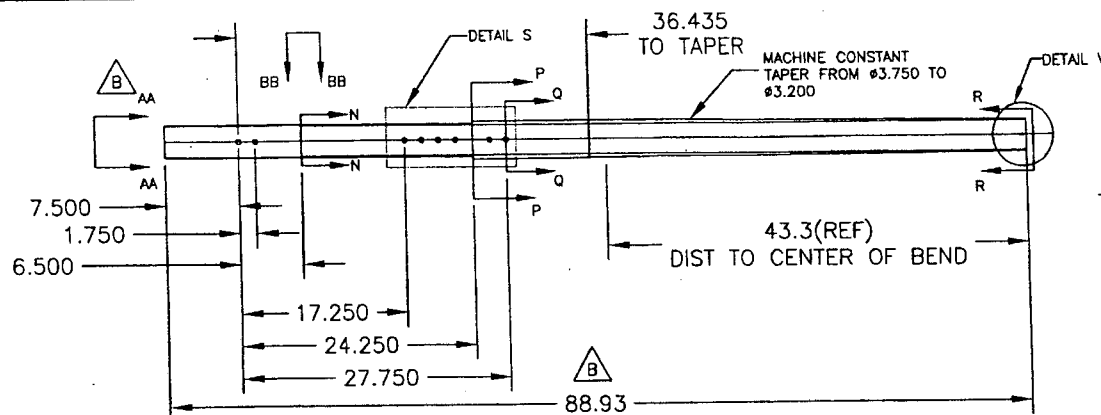
D3391-013/-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX

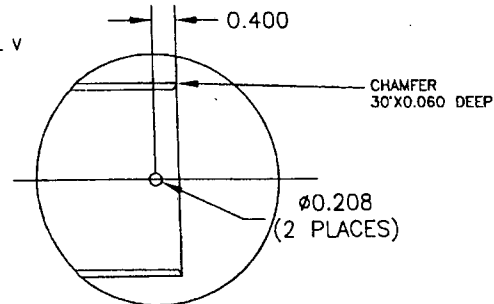
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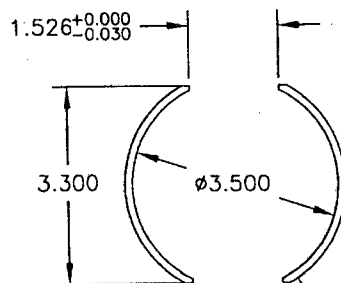
VIEW BB-BB  
(SCALE 1:3)



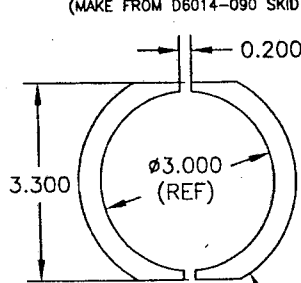
D3391-3 AFT DRILLING AND CUTTING DETAIL  
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



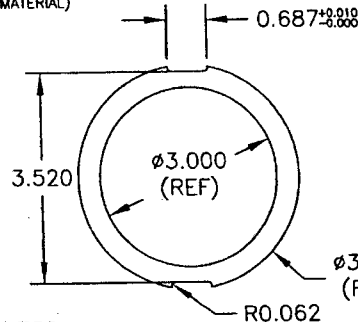
DETAIL V  
(SCALE 1:2)



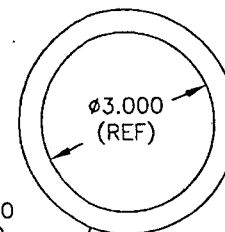
SECTION AA-AA  
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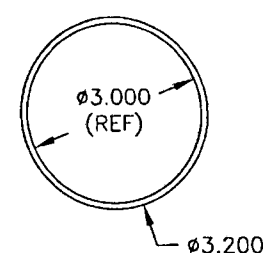
SECTION N-N  
(SCALE 1:2)



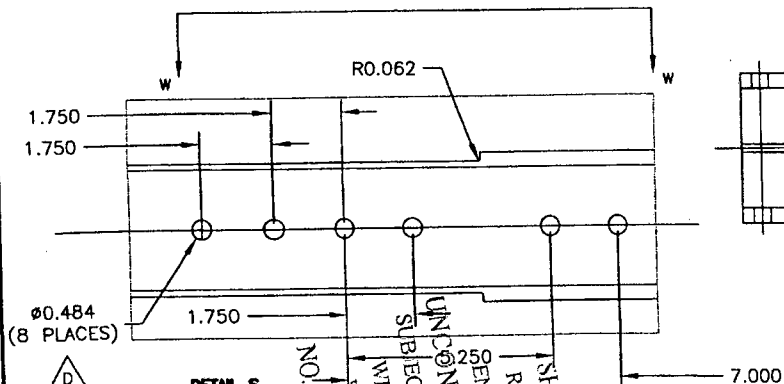
SECTION P-P  
(SCALE 1:2)



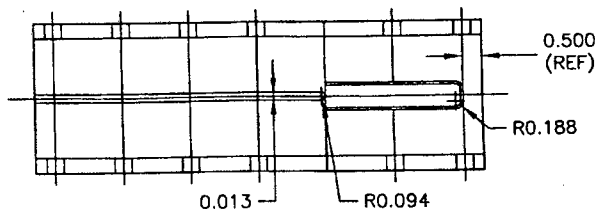
SECTION Q-Q  
(SCALE 1:2)



SECTION R-R  
(SCALE 1:2)



DETAIL S  
(SCALE 1:3)



VIEW W-W  
(SCALE 1:3)

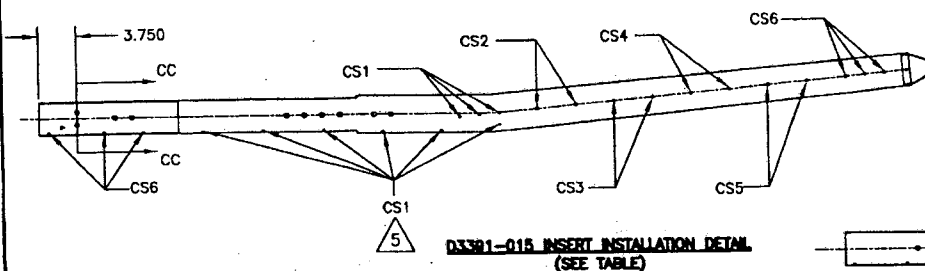
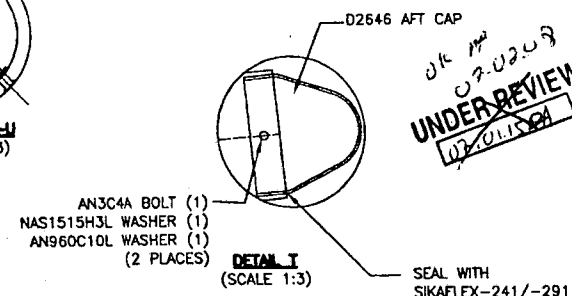
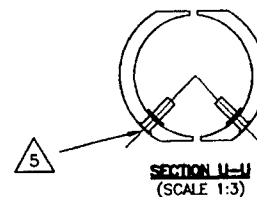
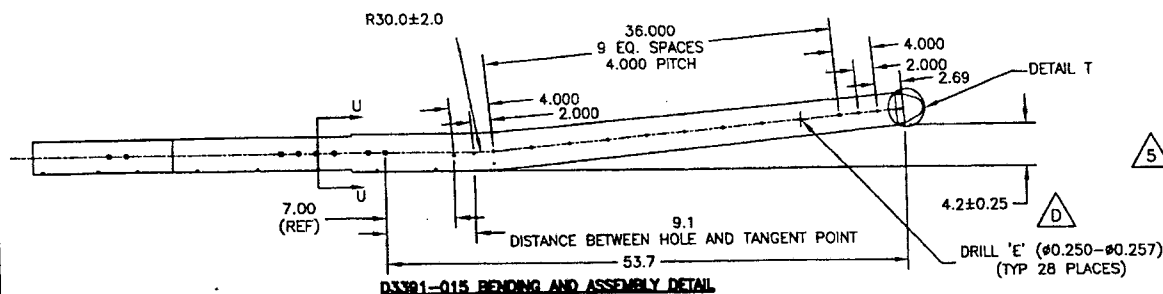
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| CHECKED | H        | APPROVED | H                  | DRAWING NO.<br>D3391                                     | SHEET 4 OF 5 |
| DATE    | 06.04.25 | TITLE    | 412 FLOAT SKIDTUBE | SCALE  | 1:12         |

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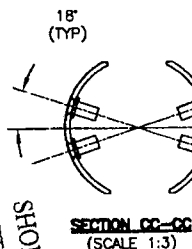
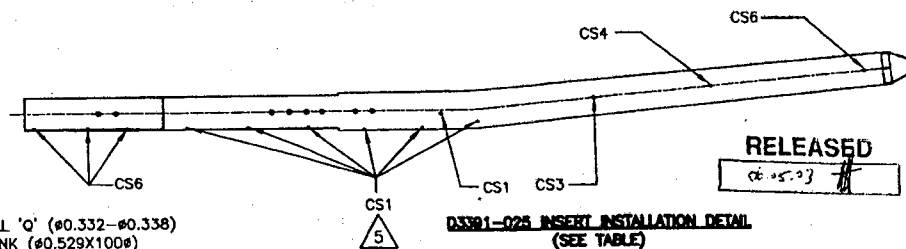
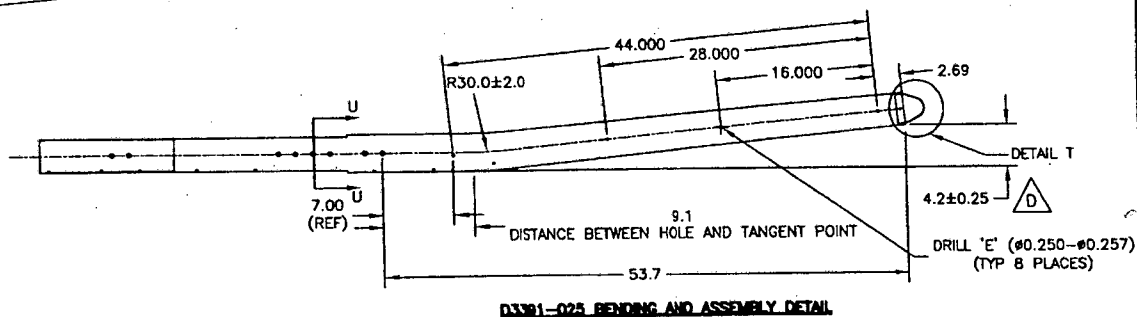


C'SINK AND INSTALL AESS10KBXXX AND/OR  
NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS  
FOLLOWS

| HOLE MARKED | QTY D3391-015 | CTY D3391-025 | C'SINK | P/N            |
|-------------|---------------|---------------|--------|----------------|
| CS1         | 18            | 14            | Ø0.425 | AESS10KB398    |
| CS2         | 2             |               | Ø0.391 | AESS10KB396    |
| CS3         | 2             | 2             | Ø0.291 | NAS1330C3KE316 |
| CS4         | 2             | 2             | Ø0.291 | NAS1330C3KE266 |
| CS5         | 2             |               | Ø0.291 | NAS1330C3KE216 |
| CS6         | 12            | 8             | Ø0.391 | NAS1330C3KE166 |

**D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST**

| QTY - 015 | QTY - 025 | PART NUMBER    | DESCRIPTION       |
|-----------|-----------|----------------|-------------------|
| X         |           | D3391-015      | AFT TUBE ASSEMBLY |
|           | X         | D3391-025      | AFT TUBE ASSEMBLY |
| 1         | 1         | D6014-090      | AFT TUBE          |
| 1         | 1         | D2646          | AFT CAP           |
| 18        | 14        | AESS10KB398    | INSERT            |
| 4         | 2         | NAS1330C3KB316 | INSERT            |
| 4         | 2         | NAS1330C3KB266 | INSERT            |
| 4         | 2         | NAS1330C3KB216 | INSERT            |
| 12        | 8         | NAS1330C3KB166 | INSERT            |
| 4         |           | NAS1330C4KB151 | INSERT            |
| 2         | 2         | AN304A         | BOLT              |
| 2         | 2         | NAS1515H3L     | WASHER            |
| 2         | 2         | AN960C10L      | WASHER            |



DRILL 'O' (#0.332-#0.338)  
C'SINK (#0.529X100#)  
NAS1330C4KB151 INSERT (1)  
(4 PLACES)

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| CHECKED             | APPROVED                    | DRAWING NO.<br><b>D3391</b>                              |
| DATE<br>06.04.25    | TITLE<br>412 FLOAT SKIDTUBE | REV. E<br>SHEET 5 OF 5<br>SCALE<br>1:12                  |

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07-01-10

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(05-03)



**Peter Hum**

---

**From:** Peter Hum [phum@dartaero.com]  
**Sent:** February 23, 2007 1:51 PM  
**To:** 'Bill Beckett'; 'S Shahbazian'; 'David Shepherd'  
**Subject:** RE: Dart 412 skidtube with Apical Floats

As discussed with Bill, we have decided to allow the release of these skidtubes with the deviation noted below

Peter

---

**From:** sjoseph@apicalind.com [mailto:sjoseph@apicalind.com]  
**Sent:** February 23, 2007 1:29 PM  
**To:** phum@dartaero.com  
**Cc:** pbravo@apicalind.com  
**Subject:** RE: Dart 412 skidtube with Apical Floats

Peter,

I do not see an issue from a functional standpoint but, I am concerned that customers would object to their packed aft floats not being in alignment with the fwd and mid floats, especially since the aft floats will both lean to one side.

Steve

---

**From:** Peter Hum [mailto:phum@dartaero.com]  
**Sent:** Friday, February 23, 2007 9:50 AM  
**To:** Steve Joseph  
**Subject:** FW: Dart 412 skidtube with Apical Floats

Hi Steve,

I originally sent the question below to Pablo. I was wondering if you might be able to help.

Thanks  
Peter

---

**From:** Peter Hum [mailto:phum@dartaero.com]  
**Sent:** February 23, 2007 10:24 AM  
**To:** Pablo Bravo  
**Subject:** Dart 412 skidtube with Apical Floats

Hi Pablo,

I hope you're enjoying the California winter. We have a decent amount of snow on the ground here.

Please see my attached .pdf drawing. We are trying to send out a Dart 412 float skidtube equipped with the holes for the Apical Tri-bag system (624.8001)

The aft float bag hole provisions are designed in order to have the aft float bag be vertical (i.e. the girt is 90 degrees to the horizontal)

23/02/2007

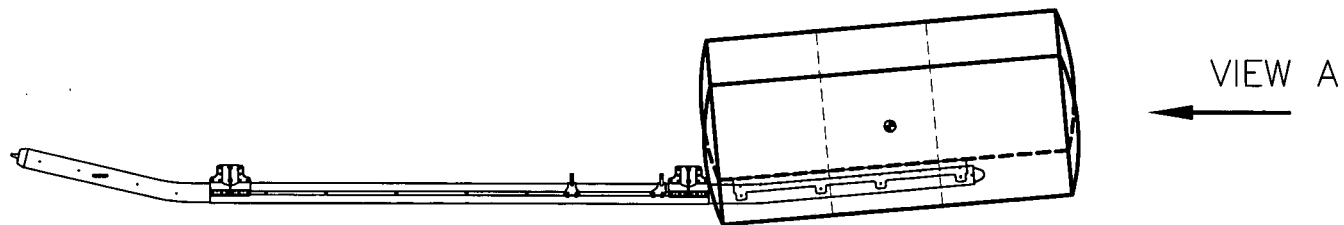
In the manufacturing of the aft portion of the skidtube. The holes for the girt we have made are rotated 6.5 degrees with respect to the vertical, this was a manufacturing error. Therefore, when the bag is installed/or deployed it will be rotated 6.5 degrees (inboard or outboard). It will be inboard or outboard depending on which side of the aircraft the skidtube is installed, because the Dart 412 float skids aren't handed.

The forward and mid bags are okay.

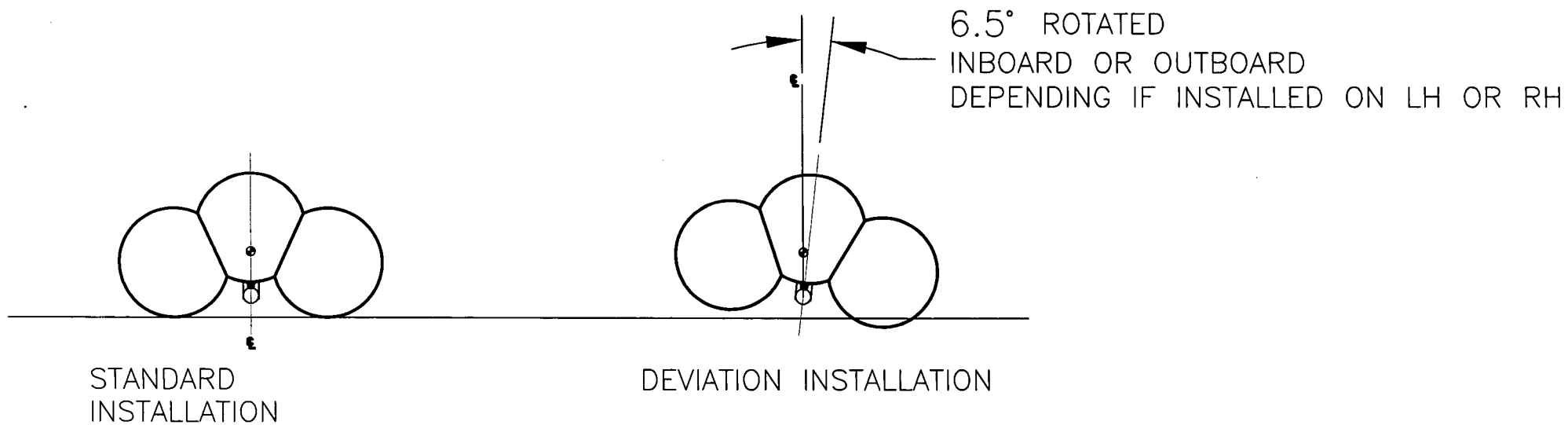
Is having the aft float bag rotated by 6.5 degrees inboard or outboard still acceptable for installation on aircraft?

Thanks  
Peter

BELL 412 WITH APICAL FLOATS



AFT FLOAT (624.8001)  
VOLUME: 67.46 CUBIC FT.



VIEW A